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ENGAGING THE ADOLESCENT LEARNER

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Reading and Reasoning: Fostering Comprehension Across Multiple Texts

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The challenge of reading in the 21st Century isn't in finding information; it's in figuring out how to consolidate all this readily available information in ways that facilitate understanding (Goldman, 2004). Certainly students' search habits have much to do with this: Most are able to locate a multitude of resources with a few keystrokes. But they remain challenged about how to synthesize disparate information, especially when it is contradictory. As well, even though many can distill a single reading, most can't effectively utilize multiple texts to strengthen arguments.

Consider just how difficult it is, even for a strong reader, to turn disparate documents into a coherent set of information. As readers, we rely on the author to link concepts within a single piece of text (Goldman & Rakestraw, 2000). Authors typically use connectives such as *because* and *however*, place main ideas at the beginning of a paragraph to enhance comprehension, and provide transitional phrases such as *in summary* to signal organizational shifts.

No such devices bridge multiple documents. A reader must construct meaning for herself by building organizational bridges that cross the divide between texts. There simply is no one there to do that for her. Other factors that make reading multiple texts more difficult include differences in the writing styles used by different authors, competing perspectives and interpretations, and even the chronology of when the documents were created.

Most of us have experienced this in our own lives, such as when we try to distill information about a medical condition from an Internet search. Like our students, we are novices in regard to the content, and figuring out how to best treat that stuffy nose and sore throat we're suffering from isn't helped when reading so much conflicting advice (starve a cold and feed a fever?). Without the ability to evaluate the source of the information, identify areas of corroboration and disagreement, and make decisions about what to ignore and what to pursue, we cannot take action. We're left feeling confused and no better off than when we started.

The ability to read and write from multiple texts has implications for testing and accountability as well. A looming challenge lies in the suite of assessments currently being developed by the Smarter Balance Assessment Consortium and the Partnership for Assessment of Readiness for College and Careers. Forty-six states belong to one of these consortia, which are charged with developing measurement systems aligned with the Common Core State Standards. The English language arts and content literacy standards repeatedly refer to the expectation that students can manipulate information across texts and platforms. College and Career Readiness (CCR) writing anchor standard 8 illustrates this point: "Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism" (NGACBP & CCSO, 2010, p. 41). Keep in mind that "print and digital sources" refers not only to written texts, but also video, sound recordings, charts, diagrams, and photographs. In this column, we discuss the unique characteristics of reading and writing across multiple texts and instructional approaches that support comprehension.

Fostering Comprehension of Multiple Texts

Literary, informational, and persuasive texts don't exist in a vacuum. They were written by someone for a particular purpose, at a specific time, for a designated audience. To understand a text is to know that these dimensions matter. History educator Wineburg (1991) refers to the practice of identifying these as *sourcing* and *contextualizing*. Sourcing a text requires students to examine the publication date and the author's



biographical statement, for instance. Texts are then contextualized by locating the writing within a time period, determining the purpose, and identifying the audience for whom it was intended.

Notice that we're not discussing the simpler forms of reading comprehension—determining main ideas and such—but rather linking what occurs within the page to the social, biological, or material world. Importantly, we are also not describing the serial reading of lots of different texts without opportunity to figure out how they intersect. Multiple-text comprehension does something important to the mind; it links reading to reasoning. The documents model framework describes comprehension across texts as a series of mental representations that move from understanding them singly to formulating conclusions drawn from multiple pieces (Perfetti, Rouet, & Britt, 1999):

1. Initially, students focus on the content of a single text, moving to sourcing and contextualizing through re-reading and text-dependent questions designed to prompt discussion.
2. They repeat this process with a second piece of text, including re-reading and discussion. Now questions are used to guide student thinking about *intertext* processes. Are the documents in agreement with one another? How do they differ? Does the information from one corroborate or expand on the information of the other?
3. Moving forward, students are challenged to form an *integrated mental model* in which they must decide what information must be discounted or ignored, what information overlaps and is therefore corroborated, and what is unique but credible.

4. These processes are driven by *tasks* that require students to synthesize information from more than one piece of text. Often these come in the form of a written or oral assignment. There is a growing body of evidence that the quality of the task questions can either foster or inhibit a student's ability to write critically in history (Monte-Sano & de la Paz, 2012) and to engage in argumentation in science (Chin & Osborne, 2010).

Getting Started: Creating Experiences With Multiple Texts

Let's face it—as secondary educators we rarely use multiple pieces of text for teaching content. Most assigned reading comes from the textbook or anthology and is often “one and done.” In other words, students rarely consult a text once they have read it through a single time. This is what makes close reading so unfamiliar because teachers and students don't routinely linger on a piece. To be sure, some readings are simple enough that they don't warrant such careful inspection. However, many of the readings we use in our classroom would be excellent candidates for the kind of repeated reading and discussion that is driven by text-dependent questions (see the [January 2012](#) and [April 2012](#) editions of this column for more information on close reading and text-dependent questions). These practices, and the habits of mind that accompany them, are foundational for understanding multiple texts.

Another barrier is our own familiar instructional practices. We rarely



bring back a previously taught piece in order to compare it to another. In order for students to develop the skills they need to compare information and ideas across texts, they must regularly revisit them. It isn't always necessary for students to be confronted with two or more unfamiliar readings all at once. Building the comparative skills to process concepts will likely mean that students use a known piece of text to understand a new reading.

U.S. Government teacher Sheryl Segal did just that a few days after the 2012 presidential election. She resurrected a familiar piece that her 12th grade students had learned earlier in the semester, the famous “Four Freedoms” speech delivered by President Franklin Delano Roosevelt to the U.S. Congress in 1941. Her students had previously learned that Roosevelt described four goals: freedom of speech and expression, freedom of worship, freedom from want, and freedom from fear. His purpose, they had determined, was to rally public support for an impending war by placing pressure on

the politicians. Even though he was addressing Congress, his real audience was the American public.

Ms. Segal brought back a portion of Roosevelt's speech for students to use to examine the acceptance speech President Obama gave the night of the election. Using the text of the 2012 speech, they first read and discussed the major ideas, noting that the goals included congratulating his opponent, thanking his supporters, and outlining an agenda for next steps. Ms. Segal then distributed a graphic organizer with Roosevelt's four freedoms listed, as well as another concept: "...we have been engaged in change—in a perpetual peaceful revolution" (Roosevelt, 1941).

Students re-read President Obama's speech and annotated the text when statements made in 2012 echoed the ideas put forward by Roosevelt in 1941. They then recorded these quotes on the graphic organizer (see Figure 1 for one student's notes). The comparison of the two documents illuminated another concept students had not initially perceived. "Now I'm thinking about the similarities between the two times," said Simone. "Everyone's always talking about the economy and about international terrorism and wars because those are in the news every day," she said. "But it's really not so different from 1941. People then were worried about the Great Depression and the fact that the economy was so bad for so long. And then there was Hitler and Mussolini and Hirohito that were doing so many awful things in Europe and Asia. Scary, right?" Simone said. "It's not so different today. A president trying to persuade the people and the Congress that we need to remember

our founding principles to improve our economy and our safety."

Teach That Knowledge Is Complex

As noted earlier, the ability to synthesize information across multiple documents is not confined to reading comprehension. A student's belief about knowledge is also critical. Bråten and Strømsø (2010) examined the ways in which undergraduates made sense from several documents containing conflicting information. They found that those students who held a simplistic view of knowledge—that is, one that is relatively fixed, unchanging, and held by an outside authority—were poorer comprehenders of the documents. The authors stated that "not surprisingly, students tending to believe that knowledge consists of highly interrelated concepts seem better able to handle documents expressing diverse and even

contradictory ideas than students tending to believe that knowledge consists of an accumulation of isolated facts" (p. 638).

This is an important consideration for science teachers. Students often approach science documents as being fixed and absolute, with little room for debate. But debate and disagreement are at the heart of science. Multiple interpretations of data are often necessary in order to derive theoretical constructs, and the ability to engage in speculation, formulate hypotheses, and propose solutions replicates what scientists do (Wellington & Osborne, 2001). As members of the public, we witness these debates in such diverse topics as climate change, gene therapy, nuclear energy, and deep space exploration.

Seventh grade physical science teacher Edward Margate used multiple documents to examine the future of the space exploration program in the U.S. Over the course of two class periods, students watched film clips of President John F. Kennedy promising in 1961 that



FIGURE 1. Student's analysis of two speeches

Freedom of Speech and Expression	Freedom of Worship	Freedom from Want	Freedom from Fear
"whether you held an Obama sign or a Romney sign, you made your voice heard"	"freedom and dignity for every human being"	"every child has the chance to go to college"	"the destructive power of a warming planet"
"working late in a campaign office"	"a tolerant America"	"access to the best teachers and schools"	"a country that's safe and respected and admired around the world"
"we have our own opinions... and beliefs"	"with your help and God's grace"	"good jobs and new businesses"	"a nation that is defended by the strongest military on Earth and the best troops"
"we will disagree, sometimes fiercely about how to get there"	"God bless you"	"a nation that isn't burdened by debt"	"a decade of war is ending"
"as it has for two centuries, progress will come in fits and starts"	"God bless these United States"	"a generous America"	
		"a compassionate America"	
		"open to the dreams of an immigrant daughter who studies in our schools and pledges to our flag"	
		"our economy is recovering"	
"Perpetual Peaceful Revolution"			
"More than 200 years after a former colony won the right to determine its own destiny, the task of perfecting our union moves forward."			
"We are an American family and we rise or fall together as one nation and one people."			
"Democracy in a nation of 300 million can be noisy and messy and complicated."			
"The painstaking work of building consensus and making difficult compromises needed to move this country forward."			
"The role of citizens in our Democracy does not end with your vote... it's about what can be done by us together through the hard and frustrating, but necessary work of self-government."			

there would be a man on the moon before the decade ended, as well as newscasts of tragedies including the 1967 fire that killed three astronauts and the space shuttle explosions in 1986 and 2003. Students also read a newspaper editorial projecting the expenditures of NASA until 2020, an article detailing the products and technologies derived from the space program, and a letter authored by astronaut Neil Armstrong to President Obama in 2010 asking him to reconsider his decision to cancel the Constellation human spaceflight program.

“The task was really important in this case,” said Mr. Margate. “They had to plow through a lot of information and weigh the evidence to support their opinions.” His students worked in small groups to prepare their arguments, using evidence from texts to support their claims. The science teacher provided his students with a graphic organizer to foster intertextual connections and construct mental models through the use of a discussion web (Alvermann, 1991; see Figure 2). “I altered it a bit so that students would always keep both sides of the argument in mind,” he said. “I wanted them to appreciate that these are complex issues to wrestle with. It’s a chance for them to put their scientific literacy to good use.”

Teach Causal Relationships to Promote Connections

As educators we teach for conceptual connections all the time. In fact, the ability to perceive relationships between and among principles, theories, and themes is a mark of a learner’s sophistication. No matter the content we teach, we ensure that our students see these links. For instance, we use graphic organizers and concept maps as visual

representations of these cognitive connections. But when confronted with locating these links across texts, many students have difficulty with seeing the relationships between documents, treating them as silos housing discrete information.

A study of middle school social studies students illustrates this point. During a unit on the Montgomery bus boycott during the Civil Rights Movement, those who were explicitly taught causal connections between events were better able to locate and recall this information across multiple sources, including primary source documents, a documentary, and readings from their textbooks (Espin et al., 2007). For example, students in the treatment condition completed compare–contrast graphic organizers throughout the unit as they encountered each source document, always returning to ones they had previously read or viewed. They discussed these comparisons with their peers in small groups, and when viewing the documentary the teacher frequently stopped the

video to ask discussion questions that invited comparison to other events and people. Notably, the researchers found that this approach resulted in significantly deeper content comprehension for students with learning disabilities.

Require Students to Summarize in Order to Build Content Knowledge

Handling multiple documents can be quite difficult for students, especially when their prior knowledge is relatively low. In order to build their capacity to perceive connections between and among texts, make sure that they have opportunities to summarize the information. To be clear, we are not talking about summarizing individual readings but rather having them summarize the information they have gained from reading multiple texts.

Using Video and Film Effectively

The [April 2011](#) edition of this column addressed the effective use of film in the classroom. We have found that disrupting the video by asking discussion questions causes students to think more deeply about the information and prevents them from lapsing into a more passive viewing experience. At times we ask students to retell a film using the vocabulary of the film, using a routine we call Vocabulary Steppingstones. We provide pairs of students with 10 or 15 vocabulary words that will be used in the video clip and instruct them to listen for the words as they occur in the narration. These terms are printed on slips of paper and placed in an envelope. As the video clip plays, the partners move the vocabulary terms on the desk so that they are arranged in order of occurrence. When the video clip is done, the partners use the ordered vocabulary as steppingstones to retell the content to one another.

Discussion Web

Central Question:

Should the NASA Constellation human spaceflight program be funded?

Yes

BEFORE READING

No

AFTER READING

AFTER DISCUSSION

Be sure to cite your evidence!

For instance, Gil and company (2010) used five scientific readings with first-year college students and gave the groups one of two tasks: to write for summarizing or to write for argument. The first group summarized the information about climate change (the subject of the readings) while the second group stated their personal opinion and required them to use the texts to justify their position. They were scored according to the

number of transformations they made, such as paraphrasing and elaborating. In addition, their writing was tabulated according to the ways they integrated the readings, including how many texts they cited and the number of times they switched from one textual citation to another. Somewhat surprisingly, the students in the summary writing condition performed better on the number of transformations and integrations they utilized.

But it is essential to understand that argumentation is necessarily built on a strong foundation of content knowledge. Brushing past it will not result in strong writers if they do not already possess a depth of knowledge about the content itself.

Eleventh grade English teacher Mimi Lin scaffolds her students' ability to engage in writing through the use of a mnemonic designed to aid their ability to apply *topos*, a form of rhetoric used in comparative English essays (Lewis & Ferretti, 2011). *Topoi* are literary pattern analyses that are employed to more deeply understand a work and are commonly evoked in college composition classes. A common one is the ubiquity *topos*, which relies on the identification of a repeated pattern in a work, such as the use of symbolism. Students in Ms. Lin's class read and discussed several poems by Walt Whitman and Emily Dickinson during a unit on 19th century American poets. Students selected a theme to explore, such as the poet's treatment of death or love, and developed an essay using a ubiquity *topos* to shape their argument. The teacher assisted students in identifying the two specific poems they would base their essays upon and taught them The ReaDER mnemonic to scaffold their writing (Graff, 2003; Lewis & Ferretti, 2011):

- ◆ **The** is a reminder that the essay requires a *thesis*.
- ◆ **Rea** represents the need for the thesis to be supported by *reasons*.
- ◆ **D** stands for the *details* needed, such as quotes, and textual evidence.
- ◆ **E** is intended to remind students that the details must be *explained* to the reader to support their claims.
- ◆ **R** represents the need for a final *review* in the concluding portion of the paper.

"I plan on using this method again for our next comparative essay," Ms. Lin said. "It has worked really well,

Writing Moves With Multiple Documents

Teach students the moves writers use when writing across documents, whether for the purposes of summarizing information or presenting a cogent argument. These writing moves cluster into two categories: writing for transformation and writing for integration (Gil et al., 2010):

Transformational Writing Moves

- ◆ Paraphrasing content
- ◆ Elaborating using two or more textual sources
- ◆ Adding information by drawing on one's own prior knowledge
- ◆ Avoiding misconceptions and factual errors

Integration Writing Moves

- ◆ Using all of the text sources made available for the task
- ◆ Increasing the number of switches between texts (i.e., not clustering citations so that each section contains evidence drawn from text #2, followed by another section that only cites text #4, and so on.)

Extend and Deepen Content Knowledge Through Argument Writing

The researchers who examined the effects of summary writing and argument writing on multiple document comprehension had another question. Could it be that the learner's level of prior knowledge influenced how well they did? Using a similar approach, they measured each student's prior knowledge about climate change in order to divide them into low-knowledge or high-knowledge groups. This time the results differed dramatically. The high-knowledge group did much better on the argument writing task than those with low prior knowledge (Gil et al., 2010).

This has implications for how we foster reading comprehension across documents as it confirms that when readers have less background knowledge, they need more scaffolded instruction (Fisher & Frey, 2009). In this case, scaffolded instruction comes in part with learning activities that encourage students to summarize across texts before creating arguments to support a position. We feel this is an important point in designing writing tasks. The Common Core State Standards laudably call for more writing for argumentation.

and even though I don't want them to remain dependent on this for the entire year, I know it will take some more experiences with analytical writing before they get the hang of it. I'm already seeing evidence that they are looking across both texts and are not just giving me side-by-side comparisons."

Conclusion

Reading across texts is a complex process and one that requires significant attention. Although students rarely experience this type of task in school, they are often required to compare texts in college and career settings. There are a number of ways that students can be taught to

compare texts, including the focus on specific aspects of texts that allow for analysis and comparison. As Ms. Segal notes, "When students are reading multiple texts and comparing them, they engage in complex thinking. It's what we really hope for in our classrooms and it's powerful when it happens."

FIGURE 3. Guided notes for developing a comparative literature essay

Title of Whitman Poem		Title of Dickinson Poem	
Ubiquity topos selected (What element do these two poems have in common?)			
The	Thesis Statement of Essay		
Rea	Reasons the Whitman poem supports your thesis.	Reasons the Dickinson poem supports your thesis.	
D	Textual details from Whitman poem that support your reasons.	Textual details from Dickinson poem that support your reasons.	
E	Explain how this evidence supports your thesis.	Explain how this evidence supports your thesis.	
R	Review your main points and your thesis.		

IRA Resources

Stahl, S.A., Hynd, C.A., Britton, B.K., McNish, M.M., & Bosquet, D. (1996). What happens when students read multiple source documents in history? *Reading Research Quarterly*, 31(4), 430–456.

The authors examined the comprehension development of high school history students as they read a number of primary and secondary source documents on the Gulf of Tonkin incident that led to the Vietnam War. They found that students' ability to read across documents quickly broke down even though they had taken extensive notes on each. They limited their use of texts, relied on the first reading to guide their written descriptions, and provided opinions with little justification. Importantly, these students had not been taught how to strategically use the texts; they had only been presented with them.

Filkins, S. (2010). Using the jigsaw cooperative learning technique. Retrieved December 11, 2012, from www.readwritethink.org/professional-development/strategy-guides/using-jigsaw-cooperative-learning-30599.html

The jigsaw method has long been utilized as a means for developing community in the classroom and encouraging peer support. More recently, this routine is being used to encourage students to think across texts by giving students experience with becoming an expert at one text in order to deepen their understanding of other related readings. This ReadWriteThink.org strategy guide is targeted for middle school students but is equally appropriate for inexperienced high school students.

Spiro, R.J., Coulson, R.L., Feltovich, P.J., & Anderson, D.K. (2004). Cognitive flexibility theory: Advanced knowledge acquisition in ill-structured domains. In R.B. Ruddell & N.J. Unrau (Eds.), *Theoretical models and processes of reading* (5th ed., pp. 640–653). Newark, DE: International Reading Association.

This book chapter explores in detail the need for deep comprehension of texts in order to understand complex concepts. The authors explain the folly of surface comprehension and its link to subsequent reinforcement of misconceptions and stress the need for multiple representations of a concept. The final portion of the chapter discusses the advantages of a problem-based learning approach to foster advanced learning.



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